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"While they were saying among themselves 'It can not be done' it was done."

—Helen Keller

A Comparison of the Effects of Two Recording Speeds on Learning and Retention

MITAT E. ENC, Ph.D.
LAWRENCE M. STOLUROW, Ph.D.

WHILE USE OF TALKING BOOKS has increased rapidly in recent years to the extent that fifty-five thousand blind persons, of all ages, were estimated to depend upon it for most of their reading, there has been little research on the many technical and scientific problems associated with its effective use. One of the more important problems is that of the word-per-minute rate at which the material should be recorded for efficient learning. Lee Iverson[7] reports, for example, that "one of the greatest disadvantages of the talking-book method of reading is that it does not give information as rapidly as the reader can absorb it."

The present experiment was conducted to determine how the talking-book type of recording might be made more efficient for learning when used by blind school children. Specifically, it was concerned with a factor that is potentially important in the preparation of recordings for the blind, but one that, while briefly explored (Iverson, 1956), is not standardized in their preparation. The technical term in the psychology of learning for the factor studied is *temporal contiguity* (closeness of experience in time). This factor has been known, and its importance recognized by psychologists who specialize in learning, and it is unanimously accepted by them as a necessary factor in all learning. In addition, it is shown to be important in learning from listening when the learners were sighted (e.g., see Fairbanks, *et al.*, 1954).[2] However, prior to the present study no data existed for blind school children.

The principle of *temporal contiguity* says that experiences are better associated if they occur close together in time. If the word-per-minute rate (wpm rate) is too slow the learner's attention wanders and other events, including his thoughts, can intrude and reduce the effectiveness of a slow word-per-minute rate. At the other extreme, the words may occur too rapidly for the listener to comprehend their meaning so that the meaning of the material would not become associated.[11] Thus, there would appear to be a best (or optimum) rate for learning from listening—one fast enough to keep the meanings closely asso-

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The authors wish to acknowledge the help generously given by Mr. L. J. Flood, superintendent of the Braille and Sight Saving School, Jacksonville, Illinois, and by his staff. Mrs. Sohohot Enc supervised one of the groups and assisted in numerous other ways. This article was prepared by the second author and is based upon the Ph.D. dissertation of M. E. Enc, The Effect of Two Different WPM Listening Rates on Learning and Retention of Blind School Children. *University of Illinois, 1958.*

ciated, but not so fast that there isn't enough time for the listener to react to or comprehend what he hears.

One technique recently developed to increase the efficiency of voice communication is called "time compression" (see Fairbanks, *et al.*, 1954). Time compression had been accomplished in many ways before the invention of the electronic device developed by Fairbanks, *et al.*, (1954). For example, one way was to have the speaker record his speech at a faster word-per-minute rate. In this way, the material is compressed in time (the same amount of information is heard in less time), or, in other words, there is increased temporal contiguity of the experience elicited by the material that is heard.* From the communication point of view, the faster word-per-minute rate, up to the point where intelligibility suffers, can be said to be more efficient than the slower word-per-minute rate, since the former uses the listener's time more efficiently. From the point of view of learning, however, the limits of intelligibility may not also be the limits for most efficient learning.

In the study reported here, stories were recorded at two different wpm rates, and blind children listened to them. After listening, these children were given tests to determine how well they had *learned* and how much they *remembered* of what they had heard. Thus, the study was designed to determine whether, in general, the condition that is more efficient for communication is also more efficient for learning and retention. This is not intended as a definitive study of the limits of wpm rates for both communication and learning, but rather it is an example of research which could be extended to that problem and to related issues, the results of which could make modern technicological developments more useful to the blind by contributing to their educational development. From the psychological point of view it is a study which, in a general way, determines the value of the notion of temporal contiguity in learning from listening.

Problem

Two related problems were investigated. One is the utility of the psychological principle of temporal contiguity in relation to learning from listening to connected prose material. The other is to determine whether different materials, all scaled for readability at the same level, produce comparable changes in learning with changes in the word-per-minute rate when blind children learn from listening to the stories. Although these problems are closely related to one another, it is possible, nevertheless, to separate them for study at least from the point of view of emphasis. More extensive research relating the child's ability level, story difficulty measures, and subject-matter variables is required in order to determine more completely the best conditions for learning from listening. It would seem that the first two questions relating to contiguity and difficulty of material would be the ones to investigate initially. Consequently, the present experiment deals with these problems. More specifically, it is an attempt to see whether, within limits, faster wpm rates are more efficient for learning through listening when blind children are the learners.

If it is found useful to assume that temporal contiguity is important in learning from listening, then it follows that, over a range of wpm rates, stories heard at faster wpm rates would result in *more learning per unit of listening time* than stories heard at slower wpm rates. Also, if this principle is useful, it should apply to most listeners, and not to just a few of them. These two specific implications of the concept of contiguity were studied.

Method

Ten different stories were recorded on tape by a professional speaker. Each story was recorded twice, once as a *slow* wpm

* *The time compression of Fairbanks,* et al., *is, however, a distinct improvement over all existing methods. For example, it can take any recording and compress it to a desired amount.*

version and once as a *fast* wpm version. To achieve these two versions, the speaker merely adjusted his rate of speech to pre-established limits. The rates obtained are reported in Table 1. It can be seen from this table that not all fast versions were at the same wpm rate. The same is true with the slow wpm version. This table also supplies other information about the ten stories that were used. These stories were selected from Book 2, *Better Reading Books*, published by Science Research Associates, edited by Simpson (1951) for students with seventh- or eighth-grade reading ability. Both interest value and readability were taken into account. Each story was accompanied by a twenty-item, multiple-choice, objective test which also was tape recorded and used along with the stories.

Subjects

Ten boys and thirteen girls at the Illinois Braille and Sight Saving School, Jacksonville, Illinois, were used as subjects. Twenty-one of the twenty-three were selected on initial screening. Their Hayes-Binet I.Q. range was 89-144; their CA (chronological age) range was 13.5-17.6.

The criteria used in selecting the subjects were: (a) total blindness or a maximum vision of light or color perception; (b) I.Q. above 89; (c) school placement between the seventh and tenth grades; (d) desire to participate (see Table 2).

Procedure

The salient details of the procedure are summarized in Table 3. Groups I and II were treated very much alike in that they heard either a fast or a slow version of the same story and then were given the test to determine how much they remembered after an elapsed period of twenty-four hours. Following this test of *retention*, both of these two groups heard another story and were then tested on it immediately afterwards. Following this they were tested on this second story after a period of twenty-four hours. The procedure was followed from Monday through Friday. On Saturday, the groups were tested for retention on Friday's story. Beginning on the following Monday, the procedure was repeated with five additional stories until both groups had heard the same ten stories.

Groups I and II differed from each other in that one heard the fast version and the other heard the slow version of the same story. Both groups heard the same story the same day. Both groups heard fast and slow versions of stories—five of each. This was accomplished by

TABLE 1
Description of Stories

Abbreviated title	No. in book*	Serial number	Length (Number of words)	Listening time (secs.)		WPM rates	
				Slow version	Fast version	Slow version	Fast version
Bank	1	1	1376	474	385	175.2	214.2
Zoo	3	2	1376	440	355	167.2	232.2
Theatre	11	3	1383	492	415	167.4	199.8
Census	13	4	1400	494	403	127.8	208.2
Telephone	12	5	1599	548	475	175.2	201.6
War	17	6	1348	465	369	183.4	219.0
Arctic	15	7	1348	473	374	170.4	216.0
Wolf	14	8	1419	493	393	172.2	216.0
Guests	16	9	1354	485	401	165.6	202.2
Bed	9	10	1360	508	420	160.2	193.8

* See Simpson (1951b) for text of stories.

TABLE 2

Summary of Characteristics for the Three Groups of Subjects

Group	Age (years)		Grade				I. Q.		Sex	
	Mean	Medians	7	8	9	10	Mean	Medians	M	F
I	15.6	15.8	1	2	4	0	113.0	111	5	2
II	15.4	15.9	1	2	3	1	114.4	113	2	5
III	14.7	14.3	5	1	0	1	110.4	107	1	6

TABLE 3

Experimental Schedule Used*

Treatments	Day number											
	1	2	3	4	5	6	7	8	9	10	11	12
Group I												
Story number and wpm rate	1_f	2_s	3_f	4_s	5_f		6_s	7_f	8_s	9_f	10_s	
Test number	1	2	3	4	5		6	7	8	9	10	
Retest number (24 hrs. later)		1	2	3	4	5		6	7	8	9	10
Group II												
Story number and wpm rate	1_s	2_f	3_s	4_f	5_s		6_f	7_s	8_f	9_s	10_f	
Test number	1	2	3	4	5		6	7	8	9	10	
Retest number (24 hrs. later)		1	2	3	4	5		6	7	8	9	10
Group III												
Test number	1	2	3	4	5		6	7	8	9	10	

* 1_f—Story 1, fast wpm; 1_s—Story 1, slow wpm. See Table 1 for actual wpm rates used.

alternating the versions heard by a group throughout the series of ten stories. In this way, Group I heard five fast versions and five slow versions, and Group II also heard five fast and five slow versions.

Group III, on the other hand, heard none of the stories. They only took the test on the same days as Groups I and II. By having them do this along with the other two groups, it was possible to determine the amount of information which the children may have had from other sources. In other words, if Group III, who did not hear the stories, received scores comparable to those obtained by Groups I and II, then we would also know that all of the subjects in Groups I and II probably knew the material before they heard the stories. If, on the other hand, Groups I and II earned higher scores than Group III, it could be assumed that Groups I and II learned from listening. In addition, difference in the amount of learning achieved by these two groups (I vs. II) would reveal differences due to temporal contiguity, the main variable in the study.

To indicate their answers to the question on the tests the children were permitted to choose either braille machines or slates. Each child recorded a letter to represent his choice of answer to every question. Specific instructions were given the children on how they should do this before each test. In these instructions, they were told that the test procedure would contain specific requirements. They were then given a sample question, the answer to which they knew, and they were asked to answer it so as to allow them one chance to familiarize themselves with the procedure to be followed with the test questions.

The test procedure was as follows: Every question was read at a rate slower than that used in preparing the slow wpm versions of the stories and there were pauses inserted: (a) between the question and the first alternative answer; (b) between

each alternative answer; (c) between the fifth (last) alternative answer and the repetition of the question. The question and each alternative answer were repeated a second time immediately after the first presentation. When the fifth alternative had been read the second time the children were instructed to record their answer as rapidly as possible. Each child recorded a letter to represent his choice of answer. All answers were recorded at the same time so that each student was busy making his response while all the other students were doing the same thing. Therefore, it was thought to be unnecessary to select letters all of which required an equal number of dots so as to control for auditory cues provided in recording one's answers. The letters A through E were used. Observations revealed that no one waited for the other children around him to answer before making his or her response. A brief interval was allowed for making one's response and it did not permit waiting to listen. The children seemed more concerned about making their response so they could hear the next question than they did about listening for a neighbor's sounds.

A child received one point for each question he answered correctly. The maximum score per test was 20. Each score was divided by the listening time for the version heard (see Table 1). In this way, the scores used in the analysis to be reported represent the number of correct answers per minute of listening time. One version was considered to be more effective than another if it resulted in more correct answers per minute of listening time. Similarly, a child was assumed to have learned more efficiently on one version than on another if he, or she, earned higher scores per minute of listening time on more of the stories with wpm rates in one version category (either fast or slow) than in the other version category.

Results

Two sets of data were analyzed. One set included the mean *test scores* per minute of listening time (learning scores). The other set included the mean *retest scores* per minute of listening time (retention scores). The first set of scores was collected immediately after the children had listened to the story; the second after a period of twenty-four hours.

Learning Scores

The first check of the data indicated that Groups I and II had obtained their information from listening to the stories and not from previous experiences. The significance of the differences among the means of the three groups of subjects, as determined by an analysis of variance, is shown by an F (Fisher's ratio of variances) of 35.10 for the first set of five stories, and an F of 55.38 for the second set of stories. Both F ratios, for two and eighteen df (degrees of freedom), are significant beyond the one per cent level. Comparison of individual means also showed significant differences. Experimental Groups I and II had means that were over 2.5 times as large as the mean score of the controls, Group III, for both sets of five stories. Group I means were 15.50 and 16.22 for the first and second set of the five stories, respectively. Group II means were 13.48 and 14.80, respectively, for the first and second sets of five stories. Group III means (each set of five stories) were at about chance level, 5.74 and 5.94, respectively, for the first and second sets of five stories.

Score Differences in Relation to WPM Rates

Comparison of story means—Group I vs. Group II. To determine whether learning was more efficient with the "fast" or with the "slow" versions the means obtained by the groups who listened to each version were compared. These data are presented in Fig. 1. Two findings stand out. First, in nine out of ten stories, the mean was *higher* for the faster version than for the slower version. This is a statistically significant difference at the .01 level ($p. < .01$, sign-test). The one excep-

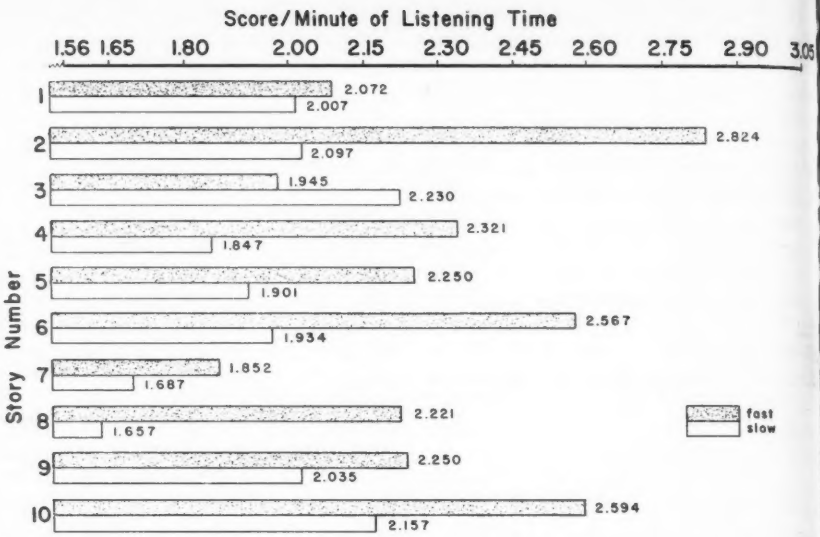

FIG. 1. Mean Score Per Minute of Listening Time for the "Fast" and "Slow" Versions of Each of 10 Different Stories

tion is story number three, and the differences between the means of the two versions on this story was .064, the smallest difference of the ten stories studied. From these data it would seem that the notion of temporal contiguity also favored learning. These blind children, although a small sample, nevertheless learned more from the faster wpm rates than from the slower wpm rates—achieving an average of 4.5 correct answers per listening minute for the fast wpm versions and only 3.7 correct answers per listening minute for the slow wpm versions. In other words, per minute of listening time, the fast versions used here resulted in an average of almost one additional correct answer per minute of listening time.

The second finding of interest in Fig. 1 is the large amount of variation in the mean scores from story to story and in the differences between the means of the two versions. This variation, related to story content, is interesting in view of the fact that the stories were prepared so as to be about equal in reading difficulty level according to the Dale-Chall formula.[1] It would appear that equating for readability allows considerable variation in listenability (listening difficulty). Nevertheless, equation in terms of readability was probably useful since without it one might find even greater variation from story to story.

Comparisons of each child's means on two versions. It was possible to compare the mean obtained by a child on five "fast" versions with his mean on five "slow" versions. This comparison was made to answer the question concerning the number of children who were benefited by the faster wpm rate. These data are presented in Fig. 2.

We found that for almost all the children the *faster* wpm versions were *more effective* (higher mean) than were the slower versions. For thirteen of the fourteen children the means based upon five "fast" versions were *larger* than were their

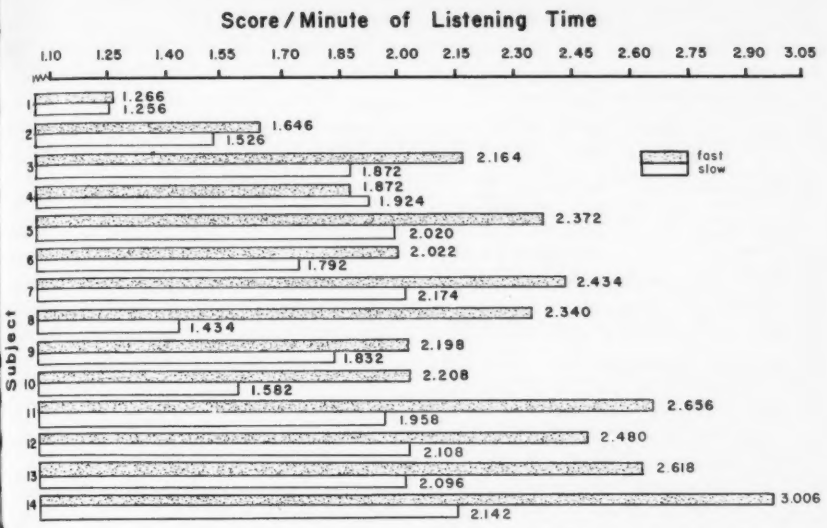

FIG. 2. Mean Score Per Minute of Listening Time for Each of 14 Subjects on Five "Fast" and Five "Slow" Versions of Stories

means on the "slow" versions (based upon the five other stories). The sign-test exceeded the .001 level. The exception was child No. 4 (Fig. 2). Among the children, there were large variations in mean scores. However, the generally favorable effect of the faster wpm rate, for all but one child, suggests that the faster wpm rates (within the general range used here for this kind of material) may have widespread implications for the preparation of talking-book recordings of the type employed in this study.

Retest Scores Per Minute of Listening Time

Retention was measured in terms of the same multiple-choice test administered a second time. This was done to find out whether the effects of listening as revealed by the learning test persisted for at least twenty-four hours. In this way, the retention effects of wpm rate could be estimated within this relatively short interval and under the limitations described. The results are reported in Fig. 3 for each of the ten stories, and in Fig. 4 for each of the fourteen children.

The pattern of the results on the twenty-four-hour retest was the same as for the original test given immediately after listening. For all but one story (#3) the mean on the *fast* version was *higher* than the mean on the slow version; also, for all but one child (#2, Fig. 2), the mean on the five "fast" versions was higher than that obtained on the five "slow" versions. (This one exception was not the same child who was the exception in the relationship on the learning test score means).

Discussion of Results

These results, while based upon a small sample of children and a small sample of stories, are nevertheless encouraging. They certainly indicate that additional research on this problem would be worthwhile. Within the limits of the study they indicate that blind school children do learn rather well from listening to a single, brief pres-

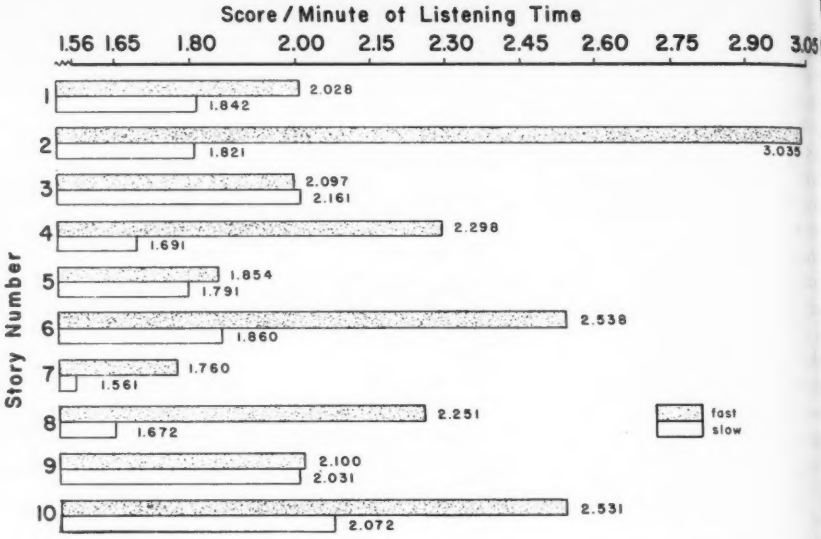

FIG. 3. Mean Retest Scores Per Minute of Listening Time for "Fast" and "Slow" Versions of Each of 10 Different Stories

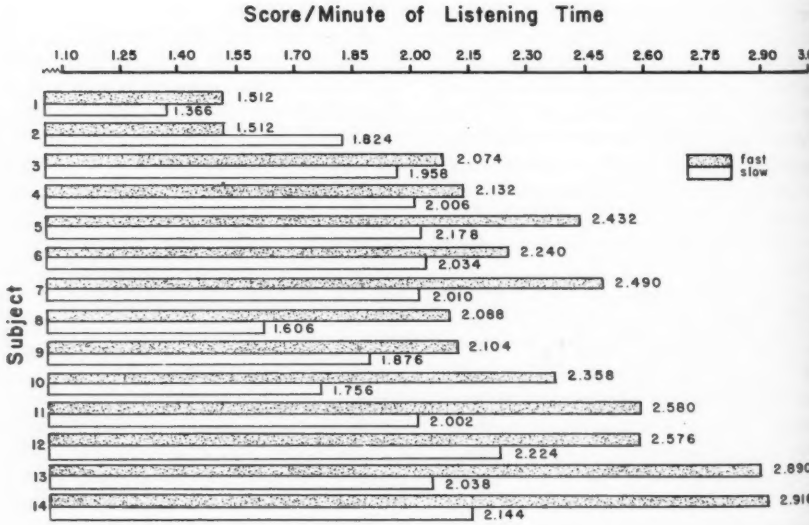

FIG. 4. Mean Retest Scores Per Minute of Listening Time for Each of 14 Subjects on Five "Fast" and Five "Slow" Versions of Stories (see Table 1)

entation of a story. The mean number of correct answers obtained by Group III was about the number that would be correct if they guessed at the answers (5.74 and 5.94, respectively, for the first and second sets of five stories). However, the groups who heard the stories answered on the average of 13.46 to 16.22 questions correctly. Additional research is needed to check this implication of the present research and thinking. More specifically, research is needed in which there would be a deliberate comparison of two groups of children with one group given talking-book materials that were directly related to their braille materials. The other group might get less, or possibly no, talking-book materials, but the same braille instruction. One question would be whether or not the talking-book material accelerated the rate at which the children learned their braille. From the present analysis it would be expected that the talking-book material would accelerate braille learning. This extension of research to a particular problem in the education of the blind is only one of the implications of this study. However, before it could be seriously considered, there is need for preparatory research of the kind reported here. In other words, we need to know the optimum learning conditions for different ability levels of children in combination with different kinds of materials so that the most appropriate kind of talking-book program can be developed.

In total, the implications of this study are that there is a need for research on the language development of the blind along some fairly specific lines. One of these lines is the determination of the optimum conditions for learning from listening since this is fundamental to several other problems. Related is the need for research to develop specific talking-book materials and other recordings for blind children of different ability levels, taking into account the word-per-minute rates that are found to be best for efficient learning. In addition, research is needed on how to integrate best the talking-book material and the teaching of braille reading and writing so that the skills support one another. Finally, it is suggested that once these advances have been made it would be appropriate to conduct a study comparing the resulting curriculum with current procedures.

Summary

The present research was based upon the hypothesis that learning from listening would not only be significant, but also that it would be more efficient, up to a point, for a faster wpm rate than for slower ones. This hypothesis was derived from the psychology of learning as it relates to temporal contiguity and learning from listening. The hypothesis has been supported by data obtained from sighted listeners and the present data based on blind school children indicates that it also applies to them. Since this finding has some specific implications for the preparation of recordings for the blind, some of these were pointed out; namely, that the type of material (e.g., easy vs. difficult in terms of readability) and the ability of the listener must be considered in the selection of an optimum word-per-minute rate to use for efficient learning. If research were conducted on these problems, then talking-book materials might be used most efficiently in connection with their education. The sample of subjects was not large (twenty-one seventh- through tenth-grade children in a state school for the blind who had Hayes-Binet I.Q.'s from 89 to 144). However, the results of the present study indicate: (a) that blind children can learn a significant amount from listening to a story that is presented just once (comparison of scores on comprehension tests of seven blind children who *did not* hear the stories with the scores of fourteen blind children who *did* hear the stories) and (b) that faster wpm rates were more efficient than slower ones (over the range of 160-233 words per minute). As measured in terms of test score per minute of listening time, those who listened to the "fast" wpm rates earned

greater scores than those who listened to the "slower" wpm rate. In addition, thirteen out of the fourteen blind children obtained higher mean scores per minute of listening time on the five fast versions than they did on the five slower versions. Furthermore, the listening-efficiency scores on the retention test that was given twenty-four hours after they heard the story were higher for those who heard the faster wpm versions than they were for those who heard the slower wpm versions, and this was true for thirteen of the fourteen children.

Implications for further research with the blind were pointed out, and their relevance to some of the basic problems in the education of blind children through the use of recordings also was indicated. These were that the talking book is a potentially important means for improving the education of the blind which would appear to justify not only some research on learning from listening but also emphasis upon developing the full capacity of the talking book as a way of improving the educational development of blind children. While originally developed for the adult, the talking book may have even greater potential advantage to the blind child. It would appear from the analysis presented here and these data that the talking book and tape recordings might be used with considerable educational gain as an integral part of the total educational program for blind school children.

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A Survey of State Legislation in 1959

HELGA LENDE

AT THE END OF the legislative year of 1959 the majority of state legislative bodies, as usual, had met to consider measures intended to regulate administrative procedures or provide new services for residents of these states. Most of the states passed some legislation which in some way relates to the welfare of blind persons. Some amendments to existing laws reflect recent or proposed changes in federal laws. Other measures derive from specific state developments and represent trends in the ever-changing picture of social welfare legislation. In this survey only such measures will be covered as indicate intended improvement in service or administrative structure. No mention will be made of routine appropriation bills unless they show that increased budget allowances make definite additional services possible.

Education of the Young Blind

Special provisions have been made in three states for the education of deaf-blind children when facilities for such education do not exist in the state.

In Connecticut (Public Act. No. 582) the Board of Education of the Blind is allowed to spend $4500 (formerly $3500) to send such children to a suitable school outside of the state. To be eligible for aid, the child and either of his parents or his guardian shall have resided in the state for three years immediately preceding application therefor.

Kansas (Chapter 311) authorizes the Department of Public Instruction to expend available funds for the purpose of sending children who are deaf-blind or otherwise severely handicapped to any facility within or without the state, providing a qualified program for the education of such children exists. The department is authorized to determine where these children should be educated. The funds may be used for evaluation and diagnosis, room and board, tuition and transportation and other relevant items. North Dakota (S. B. 98) authorizes the State Board of Administration to pay for sending children under the age of twenty-one who are deaf as well as blind, for whom there are no facilities for education in the state, to any school outside of the state where a qualified program is available. The board, through facilities under its jurisdiction, decides if and where such children should be sent for education. The funds may be spent for room, board, tuition, transportation and other items which seem relevant.

Nebraska (L. B. 281) transfers the oversight and general control of the Nebraska School for the Blind from the Board of Control to the State Department of Education, to which it also transfers the care and education of children from birth

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to the age of twenty-one who are both deaf and blind. South Dakota (S. B. 74) is authorized to move the school for the blind from Gary to Aberdeen, and (S. B. 735) appropriates the sum of $800,000 for this purpose. In Missouri steps are taken to promote the education of blind children in public school systems. House Bill 200, for this purpose, specifically includes the blind and partially seeing in the special education programs in the public schools. In Oregon (Chapter 176) a special provision for blind students enables the Commission for the Blind to pay them an amount not to exceed $750 for any one fiscal year. Grants-in-aid are established for readers and for subsistence for blind students attending approved institutions of learning.

Other changes have been made in state educational laws, mainly dealing with increases in appropriations or administrative procedures. These changes are exemplified by California (Chapters 351 and 1696), Connecticut (Chapter 591), Hawaii (Chapter 129), Kansas (Chapter 310), North Dakota (H. B. 551), and New York (Chapters 324 and 680).

Financial Aid

A number of states have increased the maximum monthly amount which may be granted in aid to blind persons. Arizona (Chapter 137) increases its maximum from $80 to $90 per month. California (Chapter 1878) increases from $99 to $104 per month the maximum basic grant payable to recipients of aid to the *needy* blind, and from $110 to $114 per month the maximum grant to those recipients whose combined grant and income is less than $115. Chapter 1879 increases from $99 to $104 per month the maximum grant of aid to *partially self-supporting* blind residents whose combined basic grant and income are less than $115, and increases from $1000 to $1200 the maximum basic amount of exempt income allowed. Both laws eliminate limitation on the maximum amount to which aid grants may be increased as a result of federal action. Incidentally, Chapters 141 and 1195 change the term "partially self-supporting blind" to "potentially self-supporting blind."

Missouri (H. B. 3 and H. B. 74) raises the amount of pension for the blind and state-federal aid to the blind from $60 to $65 per month and (H. B. 2 and H. B. 73) increases the income permitted from $2100 to $3000 per annum for both blind pension and Aid to the Blind recipients. In Nevada (A. B. 36) the minimum presumed need for an AB recipient is increased from $90 to $100 per month. In Ohio the maximum, formerly $65 per month, has been removed (S. B. 44). South Dakota (H. B. 709) makes it possible to pay an average maximum grant to a blind person of $65 per month. If the appropriation is sufficient to provide this maximum it means, in effect, that the maximum has been removed, since assistance is granted on the basis of standard needs for the family. This is similar to what was done to Old Age Assistance in the state. Finally, Vermont increases the maximum from $65 to $75 per month (Paragraph 106, Laws of 1959).

There is evident a trend of liberalization of residence requirements for Aid to the Blind throughout the country. California (Chapter 1195) provides that one year's absence of a recipient from the state will not change his status if he is prevented by illness or other good cause from returning and has not established residence elsewhere. Iowa (H. F. 747) and Maine (Chapter 365) have changed residence requirements from five years to one year; Ohio (S. B. 44) from five years to three years; and Vermont (Paragraph 101, Laws of 1959) from two out of six years to two out of three years. On the other hand New Hampshire (Chapter 177) now requires that its one-year residence requirement be a *continuous* period preceding the application for aid.

Two states have increased their burial allowance for Aid to the Blind recipients.

Indiana (Chapter 60) provides $250 for funeral director's expenses and allows $100 for cemetery plots and/or expenses. Iowa (S. F. 12) changes the allowance from $150 to $175, and Maryland (Chapter 817) from $150 to $250.

The definition of blindness is changed in two states, Alabama (Act No. 70) and Maryland (S. B. 130). These revisions were made in order to conform with the definition in the federal law.

Other minor changes have been made in state Aid to the Blind laws, mostly relating to administrative procedures. These include California (Chapters 162, 311, 410, 656 and 2029), Hawaii (Chapters 47 and 140), Maryland (S. B. 115), Nevada (A. B. 330, A. B. 378, A. B. 380), and Ohio (H. B. 771). The Nevada laws specify in detail real and other property which may be allowed a recipient of Aid to the Blind.

Agencies Serving Blind Persons

A number of states have made radical changes in their organizational set-up. Colorado (H. B. 467) creates a department of rehabilitation, describing its functions, powers and duties and transferring thereto certain functions relating to services for the blind. Thus, grouped together in one department under a commissioner who is responsible to the governor are general vocational rehabilitation, vocational rehabilitation for the blind, independent living rehabilitation services, and other related services.

Illinois (H. B. 1313) completely revised and modernized the statutes regarding the state's service program for blind persons. The Illinois Industrial Home for the Blind and Services for the Blind is abolished, and in its place is established the Illinois Visually Handicapped Institute within the Department of Public Welfare to promote the general welfare and rehabilitation of visually handicapped persons. Appropriate training in a residential center or at the individual's own home will be provided to those qualified.

Indiana (Chapter 101) establishes that the Board of Industrial Aid and Vocational Rehabilitation for the Blind shall be known as the Indiana Agency for the Blind within the Department of Health. The board of trustees of the Indiana School for the Blind, which also operates under the Department of Health, is authorized and directed to carry out the powers and duties imposed by the provisions of this Act. In Nevada (A. B. 316) the name of the State Bureau of Vocational Rehabilitation for the Blind is changed to Bureau of Services to the Blind.

Pennsylvania (Act No. 292) amends the administration code relating to the State Council for the Blind. A major feature of this law requires the State Council to counsel and advise with authorized representatives of organizations of the blind to the fullest extent practicable in the formation, administration and execution of programs for the aid and rehabilitation of the blind. Simultaneously, the name of the Council is changed to Office for the Blind, in the State Department of Welfare.

Other organizational changes have taken place. In California (Chapter 1586), the Department of Public Health is required to maintain a program for the prevention of blindness. In Indiana (Chapter 337) an advisory committee for the blind is set up within the State Welfare Department to consist of five members appointed by the governor. The committee shall act in an advisory capacity in the administration of assistance to the needy blind and may make recommendations to the Department as to related problems concerning blind persons. In Iowa (H. F. 523) the State Commission for the Blind is given authority to establish an orientation and adjustment center for blind persons, and an appropriation was passed to buy, remodel and equip a building for this purpose. Finally, the Michigan Employment Institution for the Blind is changed to Michigan Industries for the Blind (Act No. 137), to continue within the State Department of Social Welfare as an integral part of a

comprehensive program for the training and employment of blind persons seventeen years and older.

Certain provisions have been made relating to employees of state agencies serving blind persons. California (Chapter 484) spells out the duties of the home teacher and changes the name to teacher-counselor in conformity with the civil service title. Further, social security coverage is provided state employees not covered by a retirement system (Chapter 1716) and unemployment insurance coverage is extended to all service performed by blind or physically handicapped workers who do not hold civil service or permanent tenure when employed by the state in California Industries for the Blind (Chapter 1717).

In addition, minor amendments in this area, mainly of administrative nature, have been carried through some legislatures, such as California (Chapter 1624), Connecticut (Chapter 615), Hawaii (Chapter 246), Oregon (Chapter 98), South Dakota (Chapter 392), and Vermont (Paragraph 163, Laws of 1959).

Vocational Rehabilitation

The Fogarty-Elliott federal bill, introduced at the request of the National Rehabilitation Association, is still awaiting passage in Congress. However, many state legislatures this year have shown active interest in such legislation. Iowa, Utah and Washington already had comprehensive rehabilitation legislation which included independent living in its scope. Colorado (H. B. 467) incorporates this feature in the reorganization law mentioned above. Other states that have taken similar action are Arkansas (Act 34), Georgia (Section 26 of the Vocational Rehabilitation Act of 1959), Oklahoma (H. B. 858), and Tennessee (Chapter 174).

Other states have enacted independent living legislation which affects only disabilities other than blindness. These are Pennsylvania (H. R. 611), Rhode Island (Chapter 160), Florida, Montana (H. B. 85), and Minnesota.

Vending-stand operating has had its share of attention in this year's state legislatures. California (Chapter 2014) permits construction and installation for operation by blind persons of snack bars and cafeterias, in addition to vending stands, in buildings owned or occupied by the state. Connecticut (P. A. 264) provides that a person be permitted to operate a vending machine or other food service facility in addition to what he formerly was authorized to sell.

In Nevada (A. B. 170) an amendment to the rehabilitation law creates new provisions relating to establishment and operation of vending stands on public property by blind persons, and defines the powers and duties of the superintendent of the state department of buildings and grounds with respect to vending machines. New York also (Chapter 128) has passed a measure relating to vending stands. This legislation confirms the practice, followed by the commissioner of standards and purchase, of granting, wherever feasible, rent-free permits of space in state public buildings to the department for the blind vending-stand program conducted by the Commission for the Blind, and specifies that such permits may be granted in state-controlled as well as in state-owned buildings and may authorize the use of vending machines dispensing food, drink, confections, tobacco and like products in connection with such vending stands. Certain changes of administrative nature relating to vending stands and other business enterprises have also been made in Wisconsin (Chapter 341).

Another New York amendment (Chapter 749) reframes the vocational rehabilitation article under the education law to bring it up to date and broadens the scope of services to conform with federal provisions.

Progress in abolishing discrimination against employment of blind professional persons is noted. Oregon (Chapter 361) states that in the employment of public-school teachers, district school boards shall

not discriminate against blind teachers having all other qualifications required of a teacher. Pennsylvania (Act No. 110), in a somewhat more involved language, in effect provides that if an individual is otherwise qualified, he cannot be denied certification as a school teacher because of physical disabilities.

State Use Laws

Two states have enacted legislation in this area. California (Chapter 1868) amends the existing law by adding an expression of legislative intent to encourage political subdivisions of the state to purchase products manufactured by California Industries for the Blind when it is possible to do so and when proximity of a workshop for the blind makes such purchases reasonably convenient. Washington (Chapter 100) defines products labeled "made by the blind" and provides that any state or city or county agency or employee may purchase products or secure services from any nonprofit agency for the blind located within the state.

Library Service

The Michigan State Library for the Blind, located in Saginaw, has been placed under the jurisdiction of the State Board of Libraries (Act No. 127). The board shall have full power to administer the library and its appropriation, to determine the qualifications of its personnel and to fill all vacancies subject to the state civil service regulations.

Guide Dogs

Four states have enacted laws relating to guide dogs. Iowa (H. F. 183) now permits blind persons to take their guide dogs into public buildings and conveyances without being required to pay an extra charge for the dog; the penalty for denying these rights is $50 to $200. Maine (Chapter 127) entitles blind persons accompanied by guide dogs to admittance to all public conveyances, public amusements, and places of public accommodations without any extra charge; the penalty for refusing these rights is not less than $100 nor more than $300. Washington (Chapter 48) states that no blind person shall be refused service in any public place or accommodation solely because he is accompanied by a guide dog. Finally, Wisconsin (Chapter 217) exempts a dog specially trained to guide a blind person from the dog-license tax and a free dog license shall be made available.

Tax Exemption

Four states have taken action relating to tax exemptions. Nevada (A. B. 160) adds a definition of blindness to its law granting a property-tax exemption of $3000 to a "totally blind person." Actually, in this case "totally blind" is defined to mean anyone who falls within the usual legal definition of blindness.

Massachusetts (Chapter 444) increases the amount of real property of blind persons to be exempted from taxation from $2000 to $3000 and (Chapter 88) extends the time within which blind persons may file application for exemption of taxes.

North Dakota (S. B. 91) rules that all clothing, musical instruments and household goods owned and personally used by blind persons are exempt from personal property taxation. A further amendment (S. B. 737) also exempts from property taxes all or any part of fixtures, buildings and improvements upon any non-farm land up to an assessed value of $6000 owned and occupied as a home by a blind person. Finally, Rhode Island (Chapter 150) provides that the property of a person within the legal definition of blindness is exempted from taxation to the amount of $3000.

White Cane Laws

Two states have amended their "white cane" legislation to include requirements for drivers of vehicles to come to a full stop to avoid injury to blind persons using guide dogs as well as to those carrying white canes or white canes tipped with red.

These states are California (Chapter 304) and New Hampshire (Chapter 240).

Miscellaneous

There have been other developments in scattered areas, all of them of some interest to blind persons and those concerned with their welfare. Among these may be mentioned the Wisconsin (Chapter 47) amendment to the election laws of the state allowing a visually handicapped person to have *anyone* assist him in marking his ballot or operating a voting machine. California (Chapter 249) provides that free sport-fishing licenses issued to disabled veterans, blind persons, recipients of aid to the aged, and resident Indians shall be in the form of renewable licenses.

Issuance of distinctive number plates is authorized in Massachusetts (Chapter 495) for pleasure vehicles owned and used by blind persons.

Conclusion

We should like to express our appreciation for the generous cooperation received from agency executives and others in compiling the substance of this paper. In writing this survey we have not attempted an evaluation or analysis of the legislative measures passed. We have only tried to pass on information on a very vital subject to those who are interested in the welfare of blind persons. Future developments will determine the usefulness and the practical value of the various measures.

The Measurement of Social Distance

in Social Relations with the Blind

JOSEPH S. HIMES, Ph.D.

Frame of Reference

SOME YEARS AGO George Herbert Mead formulated the concept of the "generalized other" as the summary and universally applicable image of the persons, both known and unknown, with whom we come into contact.[5] In the flow of social relations an individual tends to modify this generalized conception to conform to the recognized characteristics of the persons he confronts. It has been recognized also that the generalized conception is adjusted to conform to the socially significant characteristics of groups that are believed, whether accurately or erroneously, to constitute special or deviant cases. Often such adaptations of the generalized-other conception become stereotypical, growing rigid and magnifying the nature of the socially significant deviation.

By this process of conceptualization, most people develop stereotypical images of the disabled members of their society. Such social stereotypes constitute the presumed appropriate adaptations of the generalized other to the special and distinguishing physical and social characteristics of the disabled individuals. In another place, three rather widespread stereotypes of the blind were differentiated and described.[3] There is reason to believe that each physical disability—deafness and crip-

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pleness as well as blindness—is significantly though differently stereotyped.

However inaccurate or inflexible such social stereotypes may be, it is clear that they serve important social functions. Thus Gowman observes: "The stereotype tends to define standardized definitions of social situations and to offer a basis of social control, as well as making possible those predictions of behavior necessary to the stability of any interactive system. . . . While the stereotype may be markedly dysfunctional for a segment of the blind population, it affords the members of the larger society a mechanism for the management of tension in their interpersonal relationships, and through the social expectations found within it, the needs of the less active blind may be fairly well accommodated. . . ."[1]

Within the present perspective of analysis it is possible to identify at least three such social functions. First, the stereotypes constitute presumably accurate and socially useful representations of disabled individuals as participants in social intercourse. That is, the stereotypical image describes the nature and extent of social disability that issues from physical disability. It also indicates the nature and extent of remaining social capability. Second, the stereotype predicts the kind of social behavior that may ordinarily be expected from the disabled individual. One is thus able to anticipate what such an individual is likely to do under presumably ordinary circumstances, and can, therefore, adjust his own behavior appropriately. As Gowman noted in the passage quoted above, the stereotype is a mechanism for managing tension in interpersonal relations. And third, the social stereotype functions to prescribe how one should act toward physically disabled individuals in ordinary social relations. Such response prescriptions are adjusted to the role image and behavioral expectations that are presumed to characterize the disabled individual.

In the earlier investigation alluded to above, it was possible to identify various social behaviors that are prescribed by the stereotypes of blindness.[4] The present investigation is limited to those prescriptions that tend to regulate social distance in social relations between able-bodied and blind individuals. An interactive model may be formulated in the following manner. When able-bodied individuals enter into social relations with blind individuals in situations that vary in degree of social intimacy, the stereotype, among other things, functions to prescribe which relationships shall be favored, which just tolerated, and which avoided.

Gowman puts the matter this way. Societies tend to manage the difficulties of associating with the blind and to make the interactional strain conventional rather than socially aberrant by placing the blind in a unique social category. They are pushed out of the major prestige system and relegated to a collateral position in the social structure. "To be shunned by friends, to be forgotten by former comrades, to be set aside by loved ones, that is poignant affliction. It is bad enough to be shut in, it is far worse to be shut out."[2]

Procedure

The investigation reported here in part undertook to test the hypothesis that the social stereotypes tend to permit or favor relatively casual or impersonal relations and to discourage or even to prohibit intimate or personal relations between able-bodied and blind individuals. A sample of 218 undergraduates in the North Carolina College were interviewed in October, 1957. The respondents were drawn from a total undergraduate population of 1,254. Only casual effort was made to insure statistically random sampling. Rather, students in social science, French, dramatic arts, and hygiene classes were asked to complete the questionnaires.

Of the 218 students comprising the sample, 79, or 36.2 per cent, are men and 139, or 63.8 per cent, are women. The sample is naturally rather young. Of the total, 121, or 55.5 per cent, are nineteen

years old and younger, while 97, or 44.5 per cent, are twenty and older. The sample was distributed as follows among the four college classes: 59, or 27.1 per cent, freshmen; 95, or 43.5 per cent, sophomores; 44, or 20.2 per cent, juniors; and 20, or 9.2 per cent, seniors.

To test the hypothesis an experimental design was devised. First, a series of interpersonal relationship situations, graduated in intimacy, was formulated. The situations were then arranged in order from the least to the most intimate and assigned weights ranging from one to six. Each situation was then phrased in a question that required the respondent to think of himself in the specified interpersonal relationship with a blind individual.* The respondent was required to answer either yes or no. (Note the questionnaire.)

This procedure contains some fairly obvious limitations. First, respondents were not permitted to express the qualifications or extenuations that doubtless characterize answers or actions in the actual social situations. Moreover, it is recognized that in completing such forms, respondents are sometimes prone to give what they regard as the expected or expedient answers. In addition, many of the students interviewed had actually experienced some, though not all, of the situations specified in the questions.

Social distance contains at least two measurable dimensions. One is revealed in the extent of rejection exhibited by the members of a population toward specified subjects. The other is manifested in the intensity of that rejection. In the present investigation the *extensive* dimension was captured and quantified in the proportion of respondents who answered "No" to the questionnaire items. The *intensive* dimension was expressed in the scale weights assigned to the six situations on the basis of degree of intimacy.

Both dimensions of social distance were combined into a single index. For this purpose the number of informants replying "No" to each question was multiplied by the appropriate weight to produce a crude score. The crude scores were divided by

** No attempt was made to define the meaning or extent of physical disability that is connoted by the term. Such definition did not appear to be essential to the investigation. Each respondent was permitted, indeed invited, to react to whatever image the word called forth. This is the meaning that is socially significant and the investigation was concerned with possible responses to the meaning and image that held significance for the individual. It seems likely, however, that the term tended to suggest extreme and seriously handicapping degrees of disability. That is, blind seems to refer to total blindness rather than to partial or impaired vision.*

QUESTIONNAIRE

Attitudes Toward Blind Individuals

1. I am willing to have a blind student attend my college.
   Yes_____ No_____
2. I am willing to have a blind student attend classes with me.
   Yes_____ No_____
3. I am willing to have a blind student live in my dormitory.
   Yes_____ No_____
4. I am willing to have a blind student as my roommate.
   Yes_____ No_____
5. I am willing to have a blind student as an occasional date.
   Yes_____ No_____
6. I am willing to have a blind student as a "steady."
   Yes_____ No_____

the total sample, 218, or the number of individuals who might have given this answer. The resultant quotients were multiplied by 100 to produce whole numbers that could be handled and compared with ease. The social distance indexes are exhibited in Table I. The right-hand column of the table contains the maximum possible indexes and provides a basis of comparison with the achieved indexes.

TABLE I

ACTUAL AND POSSIBLE MAXIMUM INDEXES OF SOCIAL DISTANCE IN STUDENT RESPONSES TO THE BLIND

Type of Situation	*Actual Indexes*	*Maximum Indexes*
College-mate	0.0	100
Classmate	0.9	200
Dormitory-mate	5.5	300
Roommate	89.8	400
Occasional date	158.2	500
Steady date	421.1	600

Findings and Interpretations

An inspection of the table shows that social distance increases directly with increase of the intimacy of social relations. Relatively little distance seems to be required in institutionally casual and permissive relationships. Greater and sharply increasing distance, however, is manifested in intimate situations that involve frequent and personal contacts.* The greatest amount of distance is indicated in those situations that involve cross-sex relationships within the romantic complex.

Fuller meaning of the achieved social-distance measures may be gained by contrasting them with the maximum possible indexes for each interpersonal relationship situation, as shown in the second column of the table. A glance at the figures shows that the blind students are not totally rejected. Only in the instance of "going steady" does the actual index exceed half the possible maximum. The requirement of social distance in this area of relationship is strong, and suggests that disabled persons are considered generally as unacceptable as courtship and marriage mates. No other index approximates half the possible maximum.

In the case of the first three interpersonal relationship situations, no or only negligible social distance is indicated. This fact reminds us that under such circumstances avoidance is easy and responses are general and transferable. When the situations increase in intimacy of social relations and thus require unique and nontransferable responses, the adjustment to the blind person is managed by indicating avoidance.

Some of the explanation of these findings seems fairly evident. Doubtless, each student informant confronted the questions in terms of reaction patterns laid down in culturally defined and socially learned stereotypes. Although social stereotypes are relatively stable, they tend to alter with empirical experience. The nature and difference of the social distance patterns portrayed above may be understood in part from this perspective.

It is known that the respondents had varied and significant experiences with disabled persons on campus. They had experienced, observed, or heard about actual relations with crippled and blind individuals in each of the test social situations. Their answers therefore very likely reflect some combination of stereotypical and empirical judgments.

The social distance prescriptions of the stereotypes seem to be supported by certain factors implicit in the more intimate and personal relationship situations. "Roommate" alludes to relations of companionship, mutual support, and assistance. A physically disabled roommate might be regarded as incapable of discharging these functions. Indeed, such a roommate might actually represent a considerable liability of dependency, a circumstance that many

** It will be seen that the social distance index increases sharply between the third and fourth interpersonal relationship situations. This rise reflects principally the increase in the proportion of respondents replying "No" to these items, for the increment of the scale weight is one, the same as in each situation. This sharp rise of the extensive dimensions may suggest unrepresentative weighting of the intensive dimension of social distance.*

students in the competitive college situation may be unwilling to undertake.

In the "occasional dating" and "going steady" situations, the social handicap that is believed to be inherent in blindness is doubtless magnified by the role demands of romantic courtship and the marriage complex. Both the romantic and stereotypical directives warn the individual against getting trapped in a socially disadvantageous arrangement. It is most clearly at these decisive points of intimate, emotionally involving, and reciprocally committing relationships that the stereotypical prescriptions of social distance become most decisive.

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The Needs of Blind Readers

ERIC JOSEPHSON, Ph.D.

ARE BLIND PEOPLE getting enough to read? Are they getting the books and other publications that they want? If not, what should and can be done about it? While an evaluation has recently been made of public library services for the blind, little is known as yet about the reading interests of blind people themselves. In this article I shall review briefly the history and present condition of these services, describe plans of the American Foundation for the Blind to conduct a nationwide survey of the reading needs of blind people, and outline some additional areas in which research is needed. The Foundation, with funds provided by the E. Matilda Ziegler Foundation for the Blind, has been carrying out studies in this general field for several years in order to help increase and improve services now being offered by public and private libraries and publishers.

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Background

The development of reading services for blind persons has always faced two major obstacles. First, the potential reading public is small, widely scattered, and relatively immobile. Second, reading matter and reading aids intended for blind persons are extremely expensive to produce and circulate.

This means that the effort required to place books in the hands of blind readers is far greater than in the case of sighted people, who have easy access to numerous libraries and to vast numbers of books, whether they actually read them or not.

Until about thirty years ago little progress had been made in overcoming these obstacles and developing adequate library and reading services for persons without sight. But, in 1931, recognizing that federal action would be necessary to provide nationwide library services for blind people, Congress passed the Pratt-Smoot law which authorized an annual appropriation of $100,000, to be administered by the Library of Congress to provide books for the adult blind. This amount has since been increased by various amendments, the most recent (in 1957) authorizing the appropriation of whatever sums may be necessary to provide sufficient reading material for blind persons. At present the federal government is spending approximately 1.35 million dollars a year on books for the blind. In 1952 another amendment to the original law extended the program's benefits to blind children above the age of five.

Since 1931 over eight thousand titles have been published for the Library of Congress in braille, Moon type and talking-book records—well over half of these titles in braille alone. The development of talking books in the early 1930's represented a major advance in the effort to increase library services for blind readers. While recorded books do not give readers the experience of direct, physical contact with words on a page, as do braille, Moon, or inkprint, no special instruction is required to handle them; and they can and do reach a far larger audience than books composed in some system of embossed type.

At the present time approximately fifty-five thousand blind persons are being served by the Library of Congress program; and a total of nearly a million and a half copies of books have been circulated among the blind since 1931. Impressive as these figures are, however, almost six out of seven blind people in the United States are still not being reached by the public library program established for them. Some are served by religious institutions; and in recent years a number of private organizations have begun to play a small but significant part in the production and circulation of books, records, and tapes among blind readers; but the great majority have no reading experiences.

Programs Surveyed

How good are the existing programs? To find out, the American Foundation for the Blind initiated a survey of public library services in 1956.* Questionnaires were sent to the various regional libraries for the blind and to the distributors of talking-book machines. As we have seen, the Library of Congress, in Washington, D. C., is responsible for purchasing books in braille, Moon type, and talking-book form. The distribution to blind readers is made through thirty regional libraries. But while the federal government assumes responsibility for the purchase of books and records, which remain its property, the distribution of these books is supposed to be financed by joint contributions from the various states and certain municipalities. However, some of the regional libraries for the blind receive no financial help at all even from the states they serve; and the heaviest burden has actually fallen on some thirteen municipal libraries which carry half the cost of distributing books.

As a result, regional libraries for the blind differ in the extent and quality of services which they provide. This means that the proportion of the blind population being reached by the federal-state program varies widely from region to region. In the area served by the Salt Lake City regional library, for example, 43 per cent of the total blind population were being

* *Francis R. St. John,* Survey of Library Service for the Blind, 1956. *New York, American Foundation for the Blind, 1957.*

reached in 1956. On the other hand, only 7 per cent of the blind in Texas were being served by the program in that state.

Furthermore, while talking-book machines remain the property of the government, their distribution has been undertaken by state agencies separate from the regional libraries for the blind. The result has been poor coordination between the efforts of the machine distributors and the libraries, and, therefore, uneven distribution of the machines.

No doubt the greatest problem faced by administrators of this program is how to extend its services to the great majority of blind people not as yet reached. In this connection the 1956 survey recommended that the federal government increase its financial support in order to produce more books and more talking-book machines; and that each state assume financial responsibility for its own blind readers.

An important phase of library service is the selection of books to be embossed or recorded. Books distributed to blind readers through the regional libraries are selected by the Library of Congress. In view of the great cost of producing and distributing books for blind readers, it is not surprising that only a fraction of the many titles printed each year for sighted readers are made available. Severely limited in the number of titles that can be transcribed or recorded, the program has aimed to appeal to the largest possible number of blind readers. Consequently, books selected for reproduction have been chiefly of the recreational and inspirational variety; and when more serious books are selected they are not usually "controversial" —in either a literary or a political sense. The publication of scholarly and technical books has been left largely to private, voluntary organizations (such as Recording for the Blind, Inc.) which actually turn out *more* titles than the public program but reach smaller, more specialized reading publics.

The problem is not just that few of the books published in inkprint are ever made available to blind readers, but that the Library of Congress' selection is not sufficiently representative of the books or magazines that are accessible to sighted readers. Still another problem is that there is too great a time lag between the appearance of a book in inkprint and its eventual reproduction in braille or on records. Furthermore, librarians circulate books among the blind chiefly through the mail and, therefore, have little direct contact with their readers. Administrators of the program have found themselves in a position where they have had to choose *for* blind readers. The question is whether they have chosen well.

Concerning the selection of books for blind readers, the 1956 Foundation survey recommended that a minimum of one thousand book titles be produced each year; that a broader selection of books be made—including more books for readers in the professions and sciences; and that the entire production of titles be speeded up.

Studying Readers' Needs

Since the 1956 survey appeared, some of its recommendations have been carried out. Thus, the federal government has increased its appropriations for the library program. But it is clear that there is much to be learned and to be done if library services for blind readers are to be extended to a larger population and if the quality of these services is to be improved.

Meanwhile, as part of its own long-range program of research into the problems of blind readers, the American Foundation for the Blind has launched a comprehensive survey of their interests and needs. In the words of M. Robert Barnett, executive director of the Foundation, this new study, together with the 1956 survey of library services, is designed to help "develop an authoritative statement of principles and standards which can be used to measure and advance the professional level of library services for blind persons." Obviously, an evaluation of library services

alone is not enough. Equally important to the development of higher standards is an understanding of the needs of blind people.

Since the Foundation's survey is just getting under way, it is too early to describe any results. It is possible, however, to give some indication of the problems to be covered. The study will *not* be restricted to people who are now obtaining braille books or talking books from the Library of Congress and the regional libraries. Rather, it will deal with the reading problems of blind people in general, which includes a relatively small number of users and a great number of non-users of public library facilities. The term "reading" is used to mean any exposure to books or other publications—directly, through braille books and magazines; or indirectly, through talking books, sighted readers, or radio and television programs in which books are discussed or read.

In planning this study it has been assumed that information about the reading interests and needs of blind people can best be obtained through direct, face-to-face interviews with them in their homes. Therefore, professional interviewers will call on a selected number of blind persons to ask them a number of questions about their reading experiences. It would be desirable to interview a representative sample of all blind people residing in the United States. But this group is so small, relatively, and so widely scattered that the cost of reaching it would be prohibitive. As an alternative, the survey will be restricted to four or five of the regional library areas. The areas selected will be fairly typical of the country as a whole; that is, they will include some regions which have superior library services and some areas where services are inferior. Within each area studied, in turn, the sample of respondents will be as representative as possible of the blind population's social characteristics.

It is hoped that the interviews with blind people will reveal how many do any reading at all; what their general reading tastes are; the extent to which they read braille or Moon type; the extent to which they use talking books or other recordings; the extent to which they depend on sighted readers; the degree to which they are satisfied or dissatisfied with present library services; their ideas for improving these services; their difficulties in communicating with and handling books or records received from libraries; and their exposure to other media of communication, such as radio. We believe that in the interests of improving library services for blind people everywhere, respondents in this survey will find the interview an interesting and rewarding experience. A questionnaire for these interviews has already been developed and tested among a sample of blind people in New Jersey.

Because this survey must be restricted to a limited number of regional library areas, its findings will not apply with equal force to all blind people or to every regional library. Nevertheless, when the results of the study are tabulated and analyzed, we expect to be in a much better position to evaluate the work now being done by public and private library services. Then we will know what blind people are reading, what they would like to read, and the extent to which their reading needs are being met. If the survey is successful, librarians serving the blind will be better able to gear services—that is, the selection and distribution of books and other published materials—to the expressed needs of blind readers.

Need for Further Research

When the study described above has been completed, the American Foundation for the Blind, in cooperation with librarians, will seek to establish standards to guide the administration of public and private library services for blind readers. However, there remain a number of areas where further research is clearly needed if these services are to be improved. These will be listed in outline form:

1. *Blind children.* In view of the special reading problems and needs of blind chil-

dren, the younger age group should most likely be studied separately. What are their needs? With the increased integration of blind pupils in the schools, what will be needed in the way of special library services for blind children? Who should administer these services?

2. *Impact of reading.* As compared with sighted readers, what are the effects of reading among blind persons—in terms of perception, level of information, and attitudes? What does reading do to blind people? What do they get out of books? What is the effect of different literary styles among blind readers?

3. *Evaluation of private library services.* Private libraries and volunteer agencies produce more titles than the Library of Congress program but reach fewer readers. This calls for some evaluation. What kinds of audiences are being reached by these private programs? To what extent are they meeting readers' needs? What coordination is needed among the various library services—public and private?

4. *Selection of books.* There is need for a thorough evaluation of the procedures by which book titles are selected for blind readers. What forces influence the selection? How can the selection of titles be made more representative of books and other publications available to the sighted population? Should the Library of Congress program appeal to the great majority of readers and their tastes, or to a smaller, more sophisticated minority as well? Sighted readers have won the right to read many controversial books. Should this right be denied blind readers who may be interested in such books?

5. *Extension of library services.* How can existing library services for blind readers be made better known? Are these services equipped to handle a larger number of readers? If not, what must be done? Would it be desirable to extend library services for those legally blind to persons with other physical handicaps? Legislation designed to achieve this purpose is frequently introduced in Congress. How large a group would be involved? What would be the impact of such an extension on existing services and programs—public and private?

6. *Reading needs of professionals.* Are the special reading needs of blind professionals being met by existing library services? If not, what course of action should be followed to reach this small but important segment of the population?

7. *Administration of public program.* At the present time the public library program for blind readers is administered by the Library of Congress. Is this the best arrangement? Are there any alternatives that would increase the effectiveness of the federal-state program of library services? Under what other auspices might the program be administered?

These and other questions will have to be answered if library and reading services for blind persons are ever to approach those available to sighted people in coverage and in quality.

A REMINDER

that the *New Outlook for the Blind*, with *Talking Book Topics* supplement, is now available on 16⅔-rpm records. It is published monthly except July and August, and released concurrently with the inkprint and braille editions.

Subscriptions to the recorded edition are $5.00 per year. Address orders to the *New Outlook for the Blind*, 15 West Sixteenth Street, New York 11, New York. Checks should be made payable to the American Foundation for the Blind, Inc.

AFB Report Submitted to White House Youth Conference

THE AMERICAN FOUNDATION for the Blind is affiliated with nearly 500 other national organizations in the Golden Anniversary White House Conference on Children and Youth, March 27 to April 2, 1960. Kathern F. Gruber is the official representative of the AFB on the Council of National Organizations on Children and Youth, the framework joining the organizations of widely different size, interests and character.

According to plans announced earlier in the winter, President Eisenhower issued 7,000 invitations to participants in this decennial White House Conference.

Some 400 people representing 300 members of the Council of National Organizations on Children and Youth met in Washington last September to discuss the principal concerns of the coming Conference, one of which is to be those children who are physically handicapped. Georgie Lee Abel, consultant in education at the AFB, attended the September meeting.

In further preparation for the Conference, Miss Gruber, who is director of the Division of Research and Specialist Services of the AFB, submitted an advance evaluative report for the AFB to the Conference for inclusion in one of seven volumes to be published by the Conference. The report provides a detailed enumeration of the concerns of the AFB for the realization, by blind and deaf-blind children, of the aim implied in the Golden Anniversary Conference theme: Help Young America Grow in Freedom.

The report, reproduced here, was presented in the AFB *Director's Report of Activities,* First Quarter 1959-60, and will be assembled with those of other major national organizations in a stocktaking for the Conference. Of the other six volumes to be published, three are included under the title, *The Nation's Children,* authored by thirty-five writers and thinkers; one is *Children in a Changing World,* a book of 70 charts prepared by the Federal Interdepartmental Committee on Children and Youth interpreting governmental statistical data; another will be a "national inventory" of unmet needs and currently pressing problems faced by the states; and the last will be a volume of *Conference Proceedings,* containing findings of the Conference and guides for citizen action at state and local levels to meet the needs of children and youth. (All seven volumes can be ordered from White House Conference headquarters at 330 Independence Avenue, S.W., Washington, D. C., at a special pre-Conference price of $10 if ordered before March 1, 1960.)

The Evaluative Report

The American Foundation for the Blind has always held as one of its primary objectives the promotion of opportunities for *blind* children and youth "to realize their full potential for a creative life in freedom and dignity." At the beginning of the decade 1950-60, the Foundation enunciated a philosophy that the blind child has a right to receive services at least equal to those which he would have received had he been sighted. Accordingly, the Foundation has emphasized the professional preparation of personnel serving blind children;

the stimulation and survey of educational programs to meet the needs of the individual blind child; the development of new techniques and methods to help the blind child master the demands of daily living; the support of pertinent research and/or legislation and social action; the pooling of national thinking related to services for blind children; the publication of literature; and the liberal sharing of the results of these varied activities with local resources throughout the nation directly serving the blind child.

In this decade the Foundation has conducted three national work sessions dealing with the preschool blind child and six national work sessions relating to the needs of the school-age blind child and youth. It has given financial and staff assistance to five institutes held for houseparents associated with residential programs for blind children. To assist personnel serving blind children to obtain additional professional preparation, the Foundation has granted 275 scholarships in order that the recipients might attend any of the fourteen appropriate summer sessions held during the decade at accredited universities and colleges and staffed largely by Foundation-selected and -financed personnel. To develop leadership people, the Foundation has subsidized a full-time professorship at one college for a three-year period and has awarded sixteen graduate fellowships in education to qualified teachers. Twelve major research projects adding to our knowledge of blind children have received Foundation support, both financial and advisory.

In the area of services to deaf-blind children, the Foundation has been directly responsible for the development of a national plan of education for these children to the effect that there are now eight programs currently enrolling a total of eighty-four deaf-blind children. To make it possible for states to pay for out-of-state services for deaf-blind children, Foundation staff has been directly involved in the development of enabling legislation and subsequent appropriations in twenty-one of the states. Also, through Foundation interest and leadership, diagnostic and evaluation procedures for deaf-blind children are now available at three centers with the Foundation assuming the total costs of the evaluations of those children from states not yet having statutory provisions to do so.

Future work of the Foundation concerning the welfare of blind children and youth will lie in continuing the objectives of the 1950-60 decade. The primary purpose lies in constantly enriching the opportunities for the estimated 34,000 blind children and youth in the United States under the age of twenty-one. Of these 34,000 children, 13,317 are enrolled in various educational programs with 6,834 attending their local schools with the sighted, and 6,483 attending residential schools.* The goal of rendering them services at least the equivalent of that which they would receive if they were sighted can be attained only by continuing to improve the quality of services rendered them; by constant vigilance with respect to new techniques and methods; by alert leadership in sharpening the focus of research projects; and by underwriting all this with an unwavering belief in the rights and potentialities of children who happen to be blind.

* *Report of the American Printing House for the Blind, January 5, 1959.*

Delta Gamma Scholarships

The Delta Gamma Foundation calls attention to its offer of scholarships for the training of orthoptic technicians and teachers and consultants for visually handicapped children. The deadline for applications is April 1, 1960. For further information write: Delta Gamma Central Office, 1820 Northwest Boulevard, Columbus 12, Ohio.

Thoughts on Seeing "The Miracle Worker"

WILLIAM GIBSON'S PLAY, *The Miracle Worker*, dealing with the first few weeks of the now-famous partnership between Annie Sullivan and Helen Keller, has earned the praises of dramatic critics in Philadelphia, Boston, and New York. Their opinions have been supported by enthusiastic audiences in these three cities, and there is promise that the play will run for many months on Broadway.

The critics have much to say that is favorable about the author, the director, the stars—both Anne Bancroft as Annie Sullivan and Patty Duke as Helen Keller—and about the rest of the cast. These remarks, however, are not intended as a review of the play. It is enough to mention that this mass of approval seems to me to be entirely justified.

It was inevitable that sooner or later a dramatist would pick some phase of Helen Keller's life as his theme. It was probably also inevitable that the choice would deal with her earliest days. Here is all the making of drama: distressed parents; a family brought to the verge of despair; an untrained and inexperienced young teacher, just out of a school for the blind herself, facing a baffling task. But the teacher proves to have been toughened by bitter childhood experiences and equal to the task. This results in the freeing of a captive child who everyone in the audience knows is to become one of the world's most beloved figures. Had this theme been handled differently, the results could have been most unfortunate. Any possible chance of helping the public to understand the problems of deaf-blind children could have been set back many years. It is perhaps something of a miracle that it was a dramatist as sensitive to human values as Mr. Gibson who got his story onto the stage first. We can only hope that it will stay right there to the exclusion of possible imitators. It is remarkable that a play which might have had so much melodrama has been written with so little sentiment and so much humor. Perhaps we should consider the fact that Arthur Penn directs another miracle of good fortune. Mr. Gibson's script in other hands would tell an entirely different story. One shudders at the thought of what amateur groups might do with it.

Teaching deaf-blind children is, indeed, a baffling task. Perhaps of all educable, handicapped groups, these children are the most difficult to reach. The patient persistence required of teachers and parents is enormous. The indulgence of pity, which almost inevitably includes some self-pity by the adult, is a temptation to be fought off at all costs. The early days of teaching a deaf-blind child are always days of struggle. Not necessarily physical struggle, as in *The Miracle Worker*, though sometimes, indeed, the going can be pretty rough. The experienced teacher realizes that the struggle is not against the child, but within herself against discouragement, frustration, sheer fatigue and pity. Fortunately, Mr. Gibson seems to have recognized this.

Helen Keller, as the symbol of successful conquest of deafness and blindness, is one of the world's greatest inspirations.

Through no fault of her own, however, she is also one of the worst hazards that parents of deaf-blind children face. With their normal hopes and ambitions for a child destroyed by his deafness and blindness, they hope for a repetition of Helen Keller's accomplishments. But Helen Keller happens to be unique. Deafness and blindness can hit any one of us in this world, and in her case it hit a child of rare potential. This accidental combination of the double handicap and superior mentality, which quite possibly is of the caliber of a genius, is hardly likely to happen again. *The Miracle Worker* will probably establish a new legend, namely, that all deaf-blind children are like the youthful Helen. Though this is not true insofar as the potential of these children is concerned, the play will help to fill in a vacuum in the thinking of most people. Few of the American public, I am sure, have ever thought about what it is like to be deaf and blind as a child. *The Miracle Worker* will provide people with some healthy concepts.

There is one small group who may find the play a difficult experience. The mothers and fathers of the deaf-blind children of this world are usually the chief victims. In this play the Kellers are tortured by doubts concerning the possibility of their child ever learning anything. So are all other parents under similar circumstances. In the play the long, long struggle, which for many children continues for months and even years, is compressed into an evening. Before the audience goes home they see a child released from a prison. The impact of Mr. Gibson's play is, undoubtedly, magnified by the knowledge, which surely everyone in the audience has, that this child did not then proceed to be an ordinary run-of-the-mill comfort to her parents, but became world-famous. Parents of a deaf-blind child seeing this play could find their chronic ordeal becoming acute for the evening, with relief coming from hopes which hardly any of them can ever expect to see fulfilled.

There is another group on whom *The Miracle Worker* will probably have a special effect. These are the teachers, attendants and housemothers engaged in the care and education of deaf-blind children. They are a small group, probably less than a hundred in all the United States. Should they see the play, it is just possible they will wonder whether they are likely to fail because they have not endured the humiliating ordeals that Annie went through in Tewksbury that made her the tough, unyielding young woman she became. Working with deaf-blind children, however, particularly little ones, is no place for the faint of heart. If the play causes any weak-hearted worker to falter, this should not be considered disastrous. The task itself would have the same effect sooner or later. Rather, I think, this group, which to my personal knowledge includes some of the finest and most sensitive educators to be found anywhere, should be proud to have it recognized that their task takes courage —unlimited courage.

Among these rambling thoughts, one persists which probably haunts most people who watch the long, long processes, sometimes lasting for years, which, hopefully, will bring the conception of language to a child who does not see and does not hear. This thought is one of awe—awe at the ease with which a normal child acquires this knowledge, usually quite unheeded by the surrounding adults. Few parents know the moment when their sons and daughters first use speech intelligently. By then the miracle has already taken place. For meaningful speech could not have come if the concept of language had not preceded it. This miracle is going on around us all every day. It is only when something interrupts the process that we take heed and think of it.

One wonders how many of the audience leaving *The Miracle Worker* will pause to think that there was an unrecorded moment when this miracle happened to each one of them.

—Edward J. Waterhouse, Director
Perkins School for the Blind

Dr. Messick Assistant Director of House Education Study

Dr. Merle E. Frampton, director of the Special Education and Rehabilitation Study of the Subcommittee on Special Education (the Elliott Committee), U. S. House of Representatives Committee on Education and Labor, has announced the appointment of Dr. John D. Messick as assistant to the director of the study.

Dr. Messick has had wide experience in public and private higher education as an administrator and has long been interested in special education and rehabilitation.

A graduate of Elon College and of New York University, where he received the Ph.D. in 1934, Dr. Messick has served as principal and superintendent of public schools in North Carolina and was dean of Elon College and New Jersey State Teachers College at Montclair. Most recently he has been president of Elon College.

Dr. Messick has been national chairman of the accreditation committee of the American Association of Colleges of Teacher Education, vice president of the North Carolina College Conference, and president of the North Carolina League for Crippled Children and Adults.

The Special Education and Rehabilitation Study Committee has had reports from two regional workshops to date, one held October 27-28 in New York, and the other December 15-17 in New Haven. The next such workshop was scheduled for January 25-26 in Birmingham, Alabama, and others will follow in representative regions of the country.

Changes in Braille Authority

Mrs. Maxine Dorf has been appointed to the three-member AAIB-AAWB Braille Authority following the resignation of Paul J. Langan. The other members are Bernard M. Krebs, librarian at the New York Guild for the Jewish Blind, in New York City, and Marjorie S. Hooper, braille editor at the American Printing House for the Blind, Louisville.

Mrs. Dorf has been a braille instructor in the transcriber-training program at the Division for the Blind of the Library of Congress, Washington, D. C., for eight years. She served as a stereotypist with the Clovernook Press, in Ohio, for more than ten years, and was a part-time braille proofreader at the American Printing House for the Blind for about a year before assuming her present post.

At a meeting in Washington December 7 and 8 the Braille Authority elected its officers. Mr. Krebs is chairman, Mrs. Dorf is co-chairman, and Miss Hooper is secretary-treasurer. Advisory committees of specialists in such fields as music, mathematics, science, and textbook transcription will be appointed to work with the Authority.

All communications concerning braille codes should be directed to the chairman, Mr. Krebs, at the New York Guild for the Jewish Blind, 1880 Broadway, New York 23, New York.

Hindsight

by M. Robert Barnett

WHAT'S YOUR CRUTCH?

During a meeting in Washington recently, I sat beside a newcomer to the field of rehabilitation, and found myself waxing eloquent for the benefit of his orientation. Among other things, I was analytically expounding upon the significance of the white cane—and then I waned. He had never either seen or heard of one.

It was rather a shock to me to encounter someone who sees no significance in the white cane. As I pride myself upon being one of those who detest minority labels, I often have disparaged the white cane myself, but I honestly didn't expect to find a citizen who has been totally ignorant of its existence.

There has been during the past few months a resurgence of interest and research-minded activity about mobility, and these oft-recurring flurries interest me greatly. I think it is about time I contributed to the literature on the subject, drawing generously upon my vast store of subjective opinionation, supported by practically no facts.

In the first place, one must examine the fundamentals of mobility. We humans get about in three principal positions—standing up, sitting down, or lying down. The latter is seldom a factor except in railroad train berths, ship's cabins, or ambulance or hospital stretchers. If one could afford it—meaning the equipment and the personnel—the lying-down method probably has the greatest appeal.

Sitting down, in my opinion, is the next best form of mobile posture. Some blind persons have reported incidents of having been met by strangers at their rail destinations accompanied by redcaps with a wheelchair. It somehow offends blind people to be treated as though they were orthopedically handicapped—but in these cases you at least have to admit they get really smooth service. I wasn't thinking of wheelchairs, though. I had in mind such sitting-down movement as in automobiles, wagons, buggies, trolley cars, busses, trains, and airplanes. Once a blind person gets himself well-ensconced in one of these, he has no further problem. Every one of them has a driver who has to look after himself and perhaps a lot of other people, and the blind person need not be greatly concerned about direction. Of course, if the blind person should wish to be the driver, then he encounters a rather sizable set of obstacles. Among these is public prejudice. The social unacceptability of the blind certainly stands out sharply here. Why, I remember the time we bought the first family automobile. The insurance company representative checked up on the car, on our credit, and on the other facts usually required, and then issued the policy for fire, theft, and collision—fifty-dollar deductible, naturally. When the policy arrived, it had a special note written in after all the other "fine print"—but not in very fine print itself. "This policy is null and void," it declared, "if driver of insured vehicle is M. Robert Barnett."

I have often thought that bicycles and sailboats might make for mobility-magic for me. I liked them both before I lost my sight. I since have discovered that each is easily operated by a blind person who has had the good fortune to have learned the technique of balance with a bike and of trimming sails in a boat. There's only one trouble—and this is uncommonly noticeable in each case: one cannot tell where he is and where he is going, probably because he cannot see. I firmly believe that this is an area for considerable research, because I strongly doubt whether those studying

the subject of sensory deprivation have yet generally accepted this concept. Until an explanation and solution are found, therefore, I urge all blind cyclists to use a tandem with a friend up front, and all blind sailors should take along another sailor. In each case, the blind person's mobility is even more favorably accomplished if the companion has strong muscles as well as eyesight.

Still in the sitting-down category, however, there might be something to be said for the horse. I often have heard blind friends muse about the possibilities they can see in a sort of Seeing Eye horse. Here is an area for study that may well produce early and practical results. For one thing, it would be exceedingly comfortable—which to my way of thinking is a basic "must." As I remember it, riding horses and motorcycles was somewhat similar. The only thing similar, of course, was in the rather pleasant sensation of motion that both can convey to the rider. The similarity ends rather abruptly when one thinks of them as a blind traveler. I now shudder to think of even trying to take off on a motorcycle. Strangely, I have never been on a horse since I was a sighted kid, and I think I will do a bit of research on my own one of these days soon. I hope it will be in company with a very docile and very intelligent horse.

The scholars should also review the experiences of blind skiing and skating enthusiasts. In classifying their findings, however, they might have some difficulty in determining whether these forms of movement are predominantly in the standing-up or the sitting-down bracket.

The topic I started out to discuss, however, was the white cane—which brings us to the category of mobility that is done in a standing-up position. Canes, as you know, are not all white. There are canes of all types—long ones, short ones, carved ones and simple ones. Some have straight handles, some have crooked handles. Some are of wood, some of metal, and some of other material. Some are collapsible, some are telescopic, some are stationary and rigid. Some are designed to glow in the dark or reflect light. The more elaborate ideas produce canes with fine wire antenna-like feelers, and some are equipped with wheels. There are, of course, some blind persons who wouldn't be caught dead with any type of cane, and maybe someday they will be.

Students of mobility, however, always seem to come back to another fundamental: when moving about in the standing-up position it generally is characteristic for the blind person to use a cane. Of course, he may not use it properly, but he uses it. And this, in case you are wondering, is the principal question that I was going to discuss: why does anybody use a cane, and more especially, a white one?

Even though a stick of some kind seems almost indispensable for detecting the terrain, I venture confidently to suggest that the use of a white cane does not have as a primary purpose any practical value of that sort. Rather, the use of a white cane by any blind person is an admission that he uses it as a crutch of a different kind—the advertising of himself as a blind person.

Normally, I am one of those who use no cane at all. Whenever I have tried one of the ever-with-you type—meaning the metal or wooden, straight- or crooked-handle variety—I have found that it is more of a nuisance than an aid. More often than not I find myself wishing that I could lose the darned thing and relax with my hand on the arm of the frequent friend.

The Lord should bless the man who designed collapsible canes. This is a device that can be kept out of sight when one does not need it—meaning as well when one does not wish to call attention to his blindness. But once left alone to negotiate a street crossing, a railroad station or a hotel lobby—then, out it comes, like a jack-in-the-box, to help guide me or you on our way. At such times, and if it is well constructed, it might even help to detect the presence of a step-up or step-down—

but that isn't why we use one that is painted white. We want others to know that we are blind, and as in the case of sailing a sailboat, we really don't know in what direction we are headed.

All of this is quite all right. The scholars will find that dependency upon the identification as well as the cane is a crutch that helps us all. I frequently use a white cane to avoid what otherwise might be really embarrassing or dangerous situations, but I may be a bit too dependent upon it as a crutch in my mobility technique. That's why it was a shock to meet a man who had never seen one—a man to whom it had no significance. If we who are blind must generally depend upon immediate identification by the public as a factor in mobility, and if we encounter very many people like him, then we will have to discover some more eloquent and unmistakable label of blindness. A Seeing Eye horse ought to do—that is, if we paint his legs white and his hooves red. That way, they might even let him park in New York City in otherwise restricted parking zones.

Glaucoma Study Launched

A five-year study to evaluate methods for screening and diagnosing one of the commonest forms of blindness in the United States has been launched with the financial support of the Public Health Service's National Institutes of Health.

Techniques currently applied to the detection and identification of glaucoma are now being evaluated at four research centers in this country through grants awarded by the National Institute of Neurological Diseases and Blindness. The grants are expected to total about $115,000 a year.

The grants have been awarded to The Wilmer Institute, Johns Hopkins University Hospital, Baltimore; Moffitt Eye Hospital, University of California Medical School, San Francisco; Department of Ophthalmology, Washington University School of Medicine, St. Louis; and the Department of Ophthalmology, State University of Iowa, Iowa City.

The study has four major aims: 1) to define glaucoma in its earliest clinical stages; 2) to develop methods of detecting glaucoma earlier than present diagnostic methods permit; 3) to understand the relation of measurable eye abnormalities, such as increased ocular tension, to the disease; and 4) to evaluate the efficiency of present diagnostic techniques. Since glaucoma seems to be a disease of families, a large proportion of the individuals studied will be the children of glaucoma patients.

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Research in Review

Conducted by Herbert Rusalem, Ed.D.

"Work-sample Learning Rates of the Mentally Retarded Trainee as Indicators of Production in a Work-Training Center," by Philip G. Lada. Master's project. San Francisco State College, June 1959.

One of the perplexing problems in the vocational counseling of blind persons is the value of tests and work-samples. The standardized test is a valuable instrument if it is found to be applicable to a particular population. It conserves time, it provides valuable hypotheses about the functioning of an individual, and it permits comparison of the testee's performance with the performances of others who share one or more characteristics with him. In a sense, a standardized test is a condensation of human experience, permitting extrapolation into an area of larger and more complex experience of greater duration. Thus, in a few minutes, some aptitude tests suggest what may be expected to occur over a longer period of time during training, and, possibly, work experience. The test is an economic way of ascertaining the possibilities of performance in a real-life setting.

Standardized tests as a group achieve this goal to some degree in the general population. As indicated by Hoffman's study (reviewed here in April 1959) and other research, standardized tests probably have less usefulness for blind clients. The critical factors of not being able to visually perceive the task and the lack of previous visual experience with similar tasks tend to differentiate the blind person from the seeing population and to cast the regular test norms into doubt. As a result, rehabilitation centers and workshops for blind persons have tended to explore the possibilities of using work-samples. Rather than an abstraction, the work-sample is a real task, often drawn from the world of work. It involves the use of real-life materials and tools under customary work conditions.

On the basis of the client's performance on a number of these work-samples, generalizations are made about his vocational capacities. The validity of these generalizations often depends upon the degree of representativeness of the work-samples, the standards of evaluation, the effectiveness of the staff in assessing performance, and the demonstrated relationship between work-sample performance and on-the-job success. The latter factor is especially elusive. Most work-samples have a deceptively simple face validity. That is, they seem so "right" for the situation. They appear to be closely related to the actual performance on a real job because work-sample testing uses real materials, tools, and work environments. Yet, for the most part, the precise value of work-samples as an evaluative instrument is, as yet, undetermined. The small amount of research in this area lacks definitiveness.

The study by Philip Ladas may shed some light on this problem. Although the population consisted of mentally retarded individuals, there is a commonality in evaluative methods and procedures which may permit bridging the gap between a program for the blind and one for the mentally retarded. This similarity will have to be conclusively demonstrated by subsequent research. However, the approach used in the Ladas study may suggest techniques which we may use in our own field as well as the general nature of the findings which we may expect to derive.

THE STUDY. "It was the purpose of this study to investigate the extent to which learning performance within the evaluation setting can predict the productivity of the mentally retarded trainee in the work-

training center. The subjects who participated in the study were twenty-five mentally retarded young adults enrolled in the daily program of the center. The age range was from eighteen to forty-five years with the mean of twenty years. The I.Q. as estimated by standardized intelligence tests ranged from 48 to 82. The mean I.Q. score was 60." A series of seven work-sample tasks was used: 1) Folding plastic table cloth covers; 2) Sorting screws of different lengths into two groups; 3) Assembling plastic pistol key chains, each consisting of six interlocking parts; 4) Racking barrettes on a wire hanger; 5) Packaging poker chips; 6) Folding squares of paper and stapling them over the edge of a small cardboard strip; and 7) Inserting printed material into a window-envelope so that the address is visible.

Three successive trials were given on each work-sample. The trials took place at intervals of two days. The achievement of each client was measured against the percentile ranks of the total group. On this basis, trainees were classified as high or low learners. At the same time, work supervisors rated the same trainees on productivity. Each trainee was rated by three supervisors. The agreement among the supervisors "was estimated to be between 72 and 88 per cent." On this basis, trainees were classified as high or low producers.

Four possible categories emerged: 1) High producer-high learner (twelve subjects); 2) Low producer-low learner (five subjects); 3) High producer-low learner (seven subjects); and 4) Low producer-high learner (one subject).

On the basis of statistical tests, it was determined that high learners tend to be high producers to a significant degree. On the other hand, low learners do not consistently become low producers. The author concludes that the learning rate alone is not a fully dependable predictor of productivity. He suggests that "important individual factors" play a role in determining productivity above and beyond the rate of learning on work-sample tasks.

IMPLICATIONS. If this study can be assumed to have applicability to service to blind persons, it holds important implications for current procedures in vocational evaluations of blind clients. Wherever work-samples are used to assess client capacities, it is highly possible that successful performance on such work-samples is closely related to ultimate success on jobs closely related to the work-samples. Thus, it can be tentatively stated that high-learning clients can be moved into related work situations with good expectation of satisfactory productivity. On the other hand, the elimination of clients who perform relatively poorly on work-samples is questionable. More than half of Ladas' low-learners went on to be rated as high producers.

Unless other evidence to the contrary is presented, work-samples of the type studied in this research are not effective screens for potential low producers. On the contrary, if the work-samples used by Ladas had been employed as a screen, they would have eliminated more high producers than low producers. There are certain methodological problems in this study which do not permit too ready an acceptance of the findings, even in the area of mental retardation. Among these are the cut-off points used for high and low learners and producers, the small number of cases, the selection of work-samples, the reliability of production ratings, and the structure of the testing situation. Yet, despite these limitations, the data suggest one implication for rehabilitation of the blind which may be made with some assurance of accuracy.

At this stage of our development, work-sample evaluations are promising instruments which must be used with great caution. Their current value seems to reside in the guidance function. That is, by observing the client in his performance on work-samples, we can achieve a better understanding of his capacities and attitudes. Through the appropriate use of these data, we can assist him to achieve a better self-understanding and a more realistic appraisal of his abilities. On the other hand,

work-samples have not yet been established as selection instruments. As currently used, they are unsatisfactory devices for eliminating clients from one or more aspects of vocational programs. Subsequent research may strengthen their usefulness as screens. Until that time, however, their indiscriminate use as criteria for acceptance or rejection is unwarranted by the existing facts. Vocational rehabilitation counselors should continue their efforts to develop more effective work-sample evaluation techniques. Until they do, caution is suggested.

Current Literature

★ "The Development of Ten Children With Blindness as a Result of Retrolental Fibroplasia," by Arthur H. Parmelee Jr., Claude E. Fiske, and Roger H. Wright. *A.M.A. Journal of Diseases of Children,* August 1959. Ten prematurely born children with normal vision and ten prematurely born children who were blind as the result of retrolental fibroplasia were evaluated in the first year of life by means of the Gesell infant development test. All were considered to be developmentally normal at that time, although one of the blind children was found to have a severe hearing defect. This article is concerned with the results of a study made of these children for the past four years. It includes case histories of the ten blind children with four tables showing their various developments. Six of them were found to be functioning normally and three subnormally, although they are believed to have normal mental potential and the low score seems to be due to severe emotional problems. Seven of the children with normal vision were available for re-testing and were found to be normal.

★ "St. Paul's Rehabilitation Center for the Blind." *Journal of Rehabilitation,* September-October 1959. An outline of the services and courses offered by St. Paul's Rehabilitation Center for the Blind, in Newton, Massachusetts. This is the only civilian center in the country designed specifically to meet the needs of the newly blinded adult. The program, which is co-educational, gives to ten resident trainees sixteen weeks of concentrated work, on the basis of a five-and-a-half-day week, ten classes a day. The courses are varied and include group psychotherapy, group vocational counseling, braille and handwriting, fencing as an aid in poise and muscle response, first aid, housekeeping, imagery stimulation and kinesthetics, mobility, shop, spatial orientation and many others. The article also describes the administration and the various procedures of organization in practice.

★ *A Child's Christmas and Other Poems,* by Robert Smithdas. Brooklyn, Industrial Home for the Blind, 1959. The fifth in a series of poems entitled "There Is a Silver Lining." This collection is published each year at Christmas, with the title poem referring to the season. The series "seeks to demonstrate the sensitivity to surroundings and the reactions of a deaf-blind man."

★ *The Good Light,* by Karl Bjarnhof. New York, Knopf, 1960. A sequel to *The Stars Grow Pale.* The hero is now fourteen and this is the story of the young man's formative years, his awakening to love and his life at the Institute for the Blind in Copenhagen. Mr. Bjarnhof writes with frankness, understanding and a profound insight into people, their hopes, desires and fears. He is widely known in Denmark today for his radio interviews, for his work as a newspaper editor, and for the several novels, short stories and essays

he has published, and, in addition, as a fine cellist who has made concert tours through Europe. Both novels have been translated into eight languages and have been very well received.

★ *Second Sight,* by Sidney Bigman. New York, David McKay Co., 1959. (Originally published in England with the title *Within These Boundaries.* London, Secher and Warburg, 1959.) The story of a man's attempt to find an answer to his life when he is faced with sudden blindness. His reactions toward his family and friends, the subtle transformation of his values, and his attempts to assert himself and to be treated as a human being are well portrayed. Mr. Bigman lost his sight in 1948 and this is his first novel to be published in this country. He resides in Italy with his family.

★ *My Eyes Are in My Heart,* by Ted Husing. New York, Bernard Geis Associates, 1959. (Condensed in *Coronet,* December 1959.) Mr. Husing, the well-known sportswriter, has written an account of his long illness. As the result of an operation for a brain tumor he was left blind, paralyzed, and without will to go on. After more than a year of hopelessness, he regained his ability to fight back and is now on the way to recovery, both emotionally and physically. The book also tells of his career in radio and television, of the many famous people he has known, and his family life.

★ *Crusade for Light: Julius R. Friedlander,* by Elisabeth D. Freund. Philadelphia, Dorrance and Co., 1959. A biography of Julius R. Friedlander, who founded the Overbrook School for the Blind in 1832. The book is the result of many years of research both in Philadelphia and abroad by the author, who is a descendant of Friedlander. It deals not only with his years at Overbrook, but also with his youth in Germany as tutor to the young Princes of Fürstenberg. The appendix lists the principles of education which Mr. Friedlander advocated all his life. An authoritative study of historic interest and significance, in addition to a warm human portrayal of a man's career.

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Appointments

★ Mrs. Margaret Ferkinhoff has been appointed as supervisor in the Special Services Division of the Lake County (Indiana) Department of Public Welfare. Casework with families of blind children is in the Special Services Division. In the same Department, Mrs. Jessie Adams has replaced Mrs. Virginia Banerjee (who resigned to remove to another state) as special counselor for blind children. Fred H. Steininger is director of the Lake County Department of Public Welfare.

★ Hugh Kenneth McCollam was appointed executive secretary of the Connecticut Board of Education of the Blind last November, succeeding Albert N. Sherberg, who resigned earlier last year. Mr. McCollam was a graduate of Yale in the Class of 1925, and then engaged in land development engineering in Florida until an accident caused his blindness. He later entered the insurance business, followed by his joining the staff of the Board of Education of the Blind in 1941 as a placement officer, then as rehabilitation supervisor, and most recently as chief of adult services.

News Briefs

★ The Dutch Society of Blind Intellectual Men and Women, of Breda, Holland, hopes to publish in braille the French encyclopedia *Le Petit Larousse*, in twenty-four volumes. The price is announced as $40. Before making a final decision to proceed, the Society wishes to have, from anywhere in the world, a minimum total of eighty orders for the new edition, which will differ from the previous edition in that four of the twenty-four volumes comprise a new supplement. Those who already have the encyclopedia may order the supplement only, if they so desire. Address: Albert Klep, P.O. Box 297, Breda, Holland.

★ Magnetic tape recordings are now being circulated to 540 readers throughout the United States by the Library for the Blind, a department of the Free Library of Philadelphia. Novels, plays and lectures are among the kinds of material loaned free of charge to persons who own tape machines. In an effort to make more titles available, part of the library's commercial record collection has been converted to tape. Many other titles have been recorded by local radio announcers and volunteers affiliated with the Volunteers Service for the Blind, Inc., of Philadelphia. These titles are produced in multiple copies by new high-speed duplicating equipment purchased from Dr. Thomas Benham of Haverford College. For lists of titles on tape and additional information, write to the Library for the Blind, Seventeenth and Spring Garden Streets, Philadelphia 30, Pennsylvania.

★ Beginning with the January 3, 1960, issue, "The News of the Week in Review," from the Sunday edition of *The New York Times*, is regularly recorded on 7-inch, 16 2/3 rpm discs. Available to blind persons, the recordings will be issued at $5 a year for blind college students, and $10 for a blind adult. The balance of the cost of production is met by a grant of $15,000 from The New York Times Foundation and gifts from other foundations and individuals. The recording is done in the studios of Recording for the Blind, Inc., by volunteers headed by the news commentator, Walter Cronkite. The weekly issues will be mailed out on Mondays, the day after publication.

★ Two new publications in the field are being planned, and a third is already being issued. National Industries for the Blind plans a monthly or bimonthly journal to meet an increasing demand from government and industry representatives with whom NIB deals, for more information about the activities and potentials of its member agencies. The publication will be

of real interest, also, to the managements and personnel of the member workshops.

The Office of Vocational Rehabilitation, Washington, D. C., is planning to publish a new periodical, *Rehabilitation Record*. A bimonthly, the first issue is to be off the press in mid-February. The intended reading audience will be state and private agency rehabilitation staffs; those involved in the OVR training program; those engaged in research and demonstration projects; medical and other professional colleagues; and all those who are responsible for construction and operation of rehabilitation centers and workshops. Every phase of the rehabilitation program will be dealt with.

The magazine will be under the editorial directorship of Sydney H. Kasper, working with W. Oliver Kincannon, Chief, Publications and Reports Service, OVR.

Beginning with January 1960, the Christian Record Benevolent Association, of Lincoln, Nebraska, added another publication to its list of periodicals. The magazine, a monthly, is notable in that it is published in large print for partially seeing persons. It will be of general inspirational nature, carrying articles on subjects of human interest, science, non-denominational religious matter, character training, and youth and family counseling. Much of the material will be the same as that appearing in braille magazines published by the Association.

The new magazine, which at the time of the announcement had not been named, is directed toward people in the later teens and toward young adults up to about age thirty-five. It is distributed free to all who are blind by legal definition but who can read large print. Inquiries should be directed to the Association, 3705 South Forty-eighth Street, Lincoln 6, Nebraska.

★ Classes for eight emotionally disturbed blind children, aged six to nine, are being conducted by the New York Guild for the Jewish Blind. A director and two assistant teachers staff the classes.

★ Dr. Samuel C. Ashcroft, assistant professor of special education at George Peabody College, Nashville, who served on a special three-month assignment from the American Foundation for Overseas Blind to study special education needs in the Philippines, returned to the United States in December. Dr. Ashcroft's findings and recommendations are expected to result in improved services to blind children.

Classified Corner

This department is a New Outlook *service to readers who wish to publish notices of positions open for application as well as those who are seeking employment in the field of work for the blind or deaf-blind. No charge is made and we will print as many as space will permit. The publishers do not vouch for statements of advertisers.*

We also will print without charge miscellaneous notices of interest to professional workers which are of a non-commercial nature. All other advertising will be accepted at rates which are available on request.

Address correspondence to: New Outlook for the Blind, 15 *West 16th Street, New York* 11, *N. Y.*

Position Wanted: Partially blind man, 23, some publicity experience, either in publicity work for agency for the blind, or teacher of blind children. B.A. and M.A. in American History from Columbia University. Knows German, French, Spanish. Anywhere in U.S.A. Harry A. Galton, Jr., 351 W. 245 St., New York 71, N. Y.

Position Wanted: In school or social service agency for the blind. A.B. and A.M. degrees in special education; 9 years experience as teacher of English, social studies, piano tuning and other courses in public and special schools; 5 years as supervisor of social and educational services for the blind in a state agency; also some experience in remedial work and vocational guidance. Box 65, *New Outlook*.

Position Open: Braille teacher for public schools in Brevard County, Florida. Salary and travel allowances. Write William J. McEntee, Director, Pupil Personnel Services, 420 Delannay Ave., Cocoa, Fla.

Position Open: Supervisor of special services, voluntary agency serving metropolitan area in Deep South, M.S.W. in social casework preferred. Minimum of five years agency experience including at least two years in supervisory position. Male or female, with ability to travel independently. Salary range $6,000-7,200, with usual fringe benefits. Address applications to Executive Director, Lighthouse for the Blind, 123 State St., New Orleans 18, La.